Work Orde April-11-13 2:04		588	4 9	*995	588*						Page 1
Revision ID:	D3189-1 Chafing Shield	d(send DSI9629 with s		Accept	*N900	040	100)* s	Setup Star	IA	S1* S2*
	4/11/13	Start Qty: 12.00 Req'd Qty: 12.00	*12*		Cust Item I Customer:	D:				14	. 1/
Approvals:	Process Pla	n: D	Date 384-//	Tooling: _ SPC (Y/N):		ate:		F	Run Sta Sto	" \	R1* R2*
Sequence ID/ Work Center II)	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Rev	ision Nbr				 -					
D3189	С	1									
100				0.00							
100 Waterjet		SHEAR Memo		0.00					0		Jn.3-5-27
FLOW CNC Waterje		1-Cut as p	er Dwa								
304.020		Dwg Rev:									
しりに	U13/5/	2-Deburr i	f necessary							-	
103	1 1 1 1	QC2- Inspect parts off	machine FAI/FAIB	0.00							
102 6	à							, 2	~		7-17-5-27

0.00

Memo

Quality Control

NCR:	Yes	/ No				WORK ORDER NON-	COI	NFORI	MANCE / UPI	DATE	QA Closed:	Date:	•
Work Ord	er:				· · ·	DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
Part I	No.					Rework Scrap Use-as-is Work Order Update		i .	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	4	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root					Descri	ption of work order update		Initial	Act	tion	Sign &		
Cause		Date	Step	Qty	(or Non-conformance	Ch	nief Eng	Desci	ription	Date	Verification .	QC Inspector
Doc/Data Equip/Tooling													
Operator												·	
Material	\vdash												
Setup		1											
Other													
Process													
Supplier													
Training													
Unapproved													
						F	AUL	T CATE	GORY				
Landi	ng (Gear				General		1			٦		1
	L	Bending				Bend		Grain			Ovalized		Pressure/Forced
	_	Centre No	t Concer	ntric to	o/s	BOM/Route	<u> </u>	Hardwa		<u> </u>	Over/Under		Temperature/Cure
		Cracks				Broken/Damaged	<u> </u>	1	on Incomplete	<u> </u>	Part Incorre		Weld
	L	Crushed/0	Crimped.		_	Burrs	<u> </u>	-	ions Incomplete/I	Unclear	Part Lost/Mi	issing	Wrong Stock Pulled
		Cuffs			<u> </u>	Contamination	\vdash	Mainte		ļ	Part Moved		
	_	Heat Trea		- 1	<u> </u>	Countersink	-	Mislabe		<u> </u>	Positioned V		امار
	\vdash	Inspection	-	Tube	_	Cut Too Short	-	Misread	1		Power Loss/	Surge	Other
	\vdash	Ripples in		- : المناسفية	_	Drill Holes	\vdash	Offset	Calibration			·····	
	<u> </u>	Torque W			n .	Drawing	-	-	Calibration				
	L	Turning S	equence		<u> </u>	Finish		Jone of 3	Sequence				

DQA:

Date:

Wave/Twist in Tube

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Work Orde		9588		*995	888*				·		Page 2
Item ID: Revision ID: Item Name:	D3189-1 Chafing Shie	eld(send DSI9629 with sp	ares)	Accept	*N900	<u>040</u>	100)* s	etup Start Stop	I VI	S1* S2*
Start Date: Required Date: Reference:	4/11/13 : 4/11/13	Start Qty: 12.00 Req'd Qty: 12.00	*12* *12*	*	Cust Item I Customer:	ID:				, .	
Approvals:		lan:				ate:		R	Run Start Stop	1/1	R1* R2*
Sequence ID/ Work Center II 105 *105* QC Quality Control	D	Operation Description QC8- Inspect parts - second	ond check	Set Up/ Run Hours 0.00	Tool ID	Tool#	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
*110 *110* Small Fab Small Fab	·	Small Fab Memo 1- Roll as pe	or Dwg D3189	0.00				_/2			SB 13/05/2
120 *120* QC Quality Control		QC5- Inspect part comple	eteness to step on W/O	0.00	> 8			13			

NCR:	Yes	/ No				WORK ORDER NON-	COI	NFORM	MANCE / UPI	DATE			•
		<u> </u>									QA Closed:	Date	
Work Ord	ar.					DISPOSITION				AGAINST DI	EPARTMENT,	PROCESS	
VVOIR OIG	٠					Rework	7		Skid-tube	Crosstube	7	Water Jet	Engineering
Part I	Vo.					Scrap	1	l.	Machining	Small Fab	Pro	d. Eng. Coor.	Quality
						Use-as-is]	Therm	noforming	Finishing	Rec/Stor	e/Packaging	Other
NCR I	No.					Work Order Update]		Large Fab	Composite	_	Supplier	
Root					Descri	ption of work order update		Initial	Act	ion	Sign &		
Cause		Date	Step	Qty	(or Non-conformance	Cr	nief Eng	Descr	iption	Date	Verification	QC Inspector
Doc/Data													
Equip/Tooling	Щ											·	
Operator	Ш		1										
Material			}						•				
Setup	Ш												
Other													,
Process	Н												
Supplier	$\vdash\vdash$							•					
Training	Н												
Unapproved	L	<u> </u>	L	<u> </u>				LT CATE	CORV				<u> </u>
• Landi	20.0			-		General	AUL	LICAIL	JONT				
Lanui		Bending			Γ-	Bend	Γ	Grain		<u></u>	Ovalized	Γ	Pressure/Forced
	-	Centre No	nt Concer	ntric to		BOM/Route	-	Hardwa	re		Over/Under	tolerance	Temperature/Cure
	\vdash	Cracks	or Concer	Terre to	· -	Broken/Damaged	\vdash	4	on Incomplete	-	Part Incorred)	Weld
	-	Crushed/	Crimned		·	Burrs	-	⊣ `	ions Incomplete/U	Inclear	Part Lost/Mi	}	Wrong Stock Pulled
	-	Cuffs	empeu.			Contamination	\vdash	Mainte	•		Part Moved		
	-	Heat Trea	ıt			Countersink		Mislabe		-	Positioned V	Vrong	
	-	Inspection		Tube		Cut Too Short		Misread		<u> </u>	Power Loss/	_	Other
	-	Ripples in				Drill Holes	\vdash	Offset		L			
	\vdash	Torque W		xtrusio	n	Drawing	\vdash	4	Calibration				

Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Work Ord April-11-13 2:		•		*995	588*						Page 3
Item ID: Revision ID: Item Name:	D3189-	1 Shield(send DSI9629 with spa		Accept	*N900	040	100)* s	Setup Sta	iV	S1* S2*
Start Date: Required Date Reference:	4/11/13	Start Qty: 12.00 Req'd Qty: 12.00	*12* *12*		Cust Item I Customer:	D:				· IN	5 /
Approvals:		s Plan:	Date:	_		ate:		F	Run Star Sto	1/1	R1* R2*
Sequence ID/ Work Center I	D	Operation Description Identify as per dwg & Sto	ck Location: <u>LQ5</u> 3	Set Up/ Run Hours 0.00	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Packaging Packaging		Memo		0.00						\	13-2-3
140		QC21- Final Inspection -	Work Order Release	0.00					12	1/31	4

0.00

Memo

*14**0***

Quality Control

13/5/31 8 13.5.31

											DQA:	Date	:
NCR:	Yes	/ No				WORK ORDER NON-C	or	NFOR	MANCE / UPDA			Data	•
					· · · · · ·						QA Closed:	Date	•
Work Ord	or:					DISPOSITION				AGAINST DE	PARTMENT,	/PROCESS	
WORK OIG	ei.	_				Rework	7		Skid-tube	Crosstube		Water Jet	Engineering
Part I	Vο					Scrap	1	1		Small Fab	Pro	d. Eng. Coor.	Quality
1 4.0	10.				 	Use-as-is	1		noforming	Finishing		re/Packaging	Other
NCR I	No.					Work Order Update	1	1	~ 	Composite	,	Supplier	
Root					Descri	ption of work order update	ļ	Initial	Actior	า	Sign &		
Cause		Date	Step	Qty		or Non-conformance	Ch	nief Eng	Descript	tion	Date	Verification	QC Inspector
Doc/Data													
Equip/Tooling									:			,	
Operator				1									
Material	$ldsymbol{ld}}}}}}$					•			_				
Setup	<u> </u>]										
Other	<u> </u> _												
Process					1					;			
Supplier	_			ĺ									
Training	<u> </u>												
Unapproved	<u> </u>	<u> </u>	<u> </u>		<u> </u>	_	<u> </u>	T.C.A.T.			<u> </u>	<u> </u>	
						· · · · · · · · · · · · · · · · · · ·	AUL	T CATE	GURY				
Landi	ng (1				General		Grain		<u> </u>	Ovalized	Γ-	Pressure/Forced
	┝	Bending			~/c	Bend BOM/Bouto	\vdash	1		ļ	Ovanzed Over/Under	toloranco	Temperature/Cure
	-	Centre No	ot Concer	itric to	U/S -	BOM/Route	-	Hardwa			Part Incorre	 	Weld
	-	Cracks	Ceimnad		-	Broken/Damaged	\vdash		on Incomplete ions Incomplete/Unc	close	Part Lost/M	├	Wrong Stock Pulled
	-	Crushed/ Cuffs	crimpea.		-	Burrs Contamination		Mainte	•	led!	Part Moved		T MI OH'S STOCK Fulled
		Heat Trea	, +		-	Countersink	-	Mislahe		<u> </u>	Positioned V	Mrong	

Misread

Out of Calibration

Out of Sequence

Outside Dimensions

Offset

Cut Too Short Drill Holes

Drawing

Finish

Folio

Power Loss/Surge

Other

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Inspection Strip in Tube

Torque Waves in Extrusion

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Picklist Print

April-11-13 2:04:58 PM

Work Order ID:

99588

Parent Item:

D3189-1

Parent Item Name:

Chafing Shield(send DSI9629 with spares)

Start Date: 4/11/13

Required Date: 4/11/13

Page 1

Start Qty: 12.00

Required Qty: 12.00

Comments:

IPP B05.08.22No longer made in-houseKJ/JLM

IPP Rev:C 06-03-24 Rolling Now made in House JLM

IPP Rev:D 07-04-16 As per Rev B JLM

wateriet DD verf ILM

IPP Rev:E 11.05.11 now made on

	waterjet DD verr.	LIVI											
Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S26GA		Purchased	No	<u> </u>		100	sf	0.0000	0.32	4.0421052		1	1 Am 13/20

304/316 .020" Sheet

0.025"

B125552

125552.

NCR:	Yes	/ No				WORK ORDER NON-	CO	NFORI	MANCE / UPDATE		QA Closed:	Date:	
Work Orde	er:					DISPOSITION			posterony		PARTMENT	/PROCESS	
Part N	•					Rework Scrap Use-as-is Work Order Update			Machining Sma	stube II Fab shing oosite		Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root	-		· · · · · · · · · · · · · · · · · · ·		Descri	ption of work order update	T "	Initial	Action		Sign &		
Cause		Date	Step	Qty	I	or Non-conformance		nief Eng	Description		Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved													
						F	AUI	LT CATE	GORY				
Landi		Bending Centre No Cracks Crushed/C Cuffs Heat Trea Inspectior Ripples in Torque W	Crimped. t n Strip in Bend laves in E	Tube xtrusio		General Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes Drawing Finish		Instruct Mainte Mislabe Misrea Offset Out of	ion Incomplete tions Incomplete/Unclear enance eled		Ovalized Over/Under Part Incorred Part Lost/Mi Part Moved Positioned V Power Loss/	ct sissing Vrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other
		Turning Se	equence		<u>L</u>	_Firmsii		100001	sequence				

Date:

DQA:

Wave/Twist in Tube

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

DART AEROSPACE LTD	Work Order:	99588
Description: Chafing Shield	Part Number:	D3189-1
Inspection Dwg: D3189 Rev: C		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
4.38	+/-0.030	4.380	V		V	JAmoi
12.00	+/-0.030	12.607			7/	Ikmo! Productos
0.020	+/-0.010	0.024	V		V	
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	-					

Measured by:	In/Ae	Audited by:	21	Preliminary Approval:	
Date:	13-5-27	Date:	1337	Date:	

Rev	Date	Change	Rev	ised by	Approved
Α	11.06.21	New Issue	KJ	Δ	2/1
В	12.09.26	Dimensions updated per Dwg Rev C	KJ	The	Chl
·				7.7	

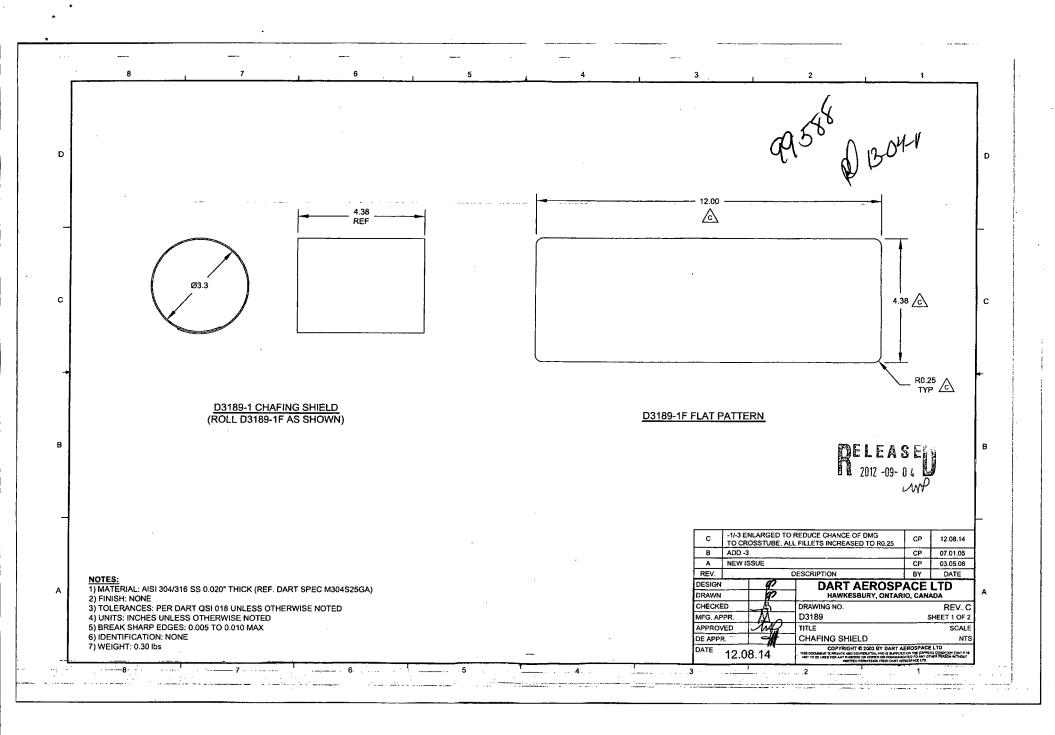
NCR: Ye	es / No				WORK ORDER NON-O	CONFO	RMANCE / UP	DATE	QA Closed:	Date	:		
Work Order	r:				DISPOSITION			AGAINST DE	PARTMENT				
Part No					Scrap Machining Small Use-as-is Thermoforming Finish			Crosstube Small Fab Finishing	Fab Prod. Eng. Coor. Quality hing Rec/Store/Packaging Other				
NCR No	0				Work Order Update	J 	Large Fab	Composite		Supplier			
Root Cause	Date				•		Initial Action nief Eng Description		Sign & Date	Verification	QC Inspector		
quip/Tooling Operator Material etup Other Process supplier Training													
Inapproved		l	L		·				<u> </u>				
Landin	g Gear			- 	F	AULT CAT	EGORY						
	Bending Centre Not Concentric to O/S Cracks Crushed/Crimped Cuffs Heat Treat Inspection Strip in Tube Ripples in Bend Torque Waves in Extrusion				Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes Drawing	Instru Main Misla Misre Offse	ware ction Incomplete actions Incomplete/ atenance beled ad t f Calibration	Unclear	Ovalized Over/Under Part Incorred Part Lost/Mi Part Moved Positioned V Power Loss/	ct sissing Vrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other		
	Turning Sequence				Finish	[Out o	Out of Sequence						

DQA:

Date:

Wave/Twist in Tube

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G



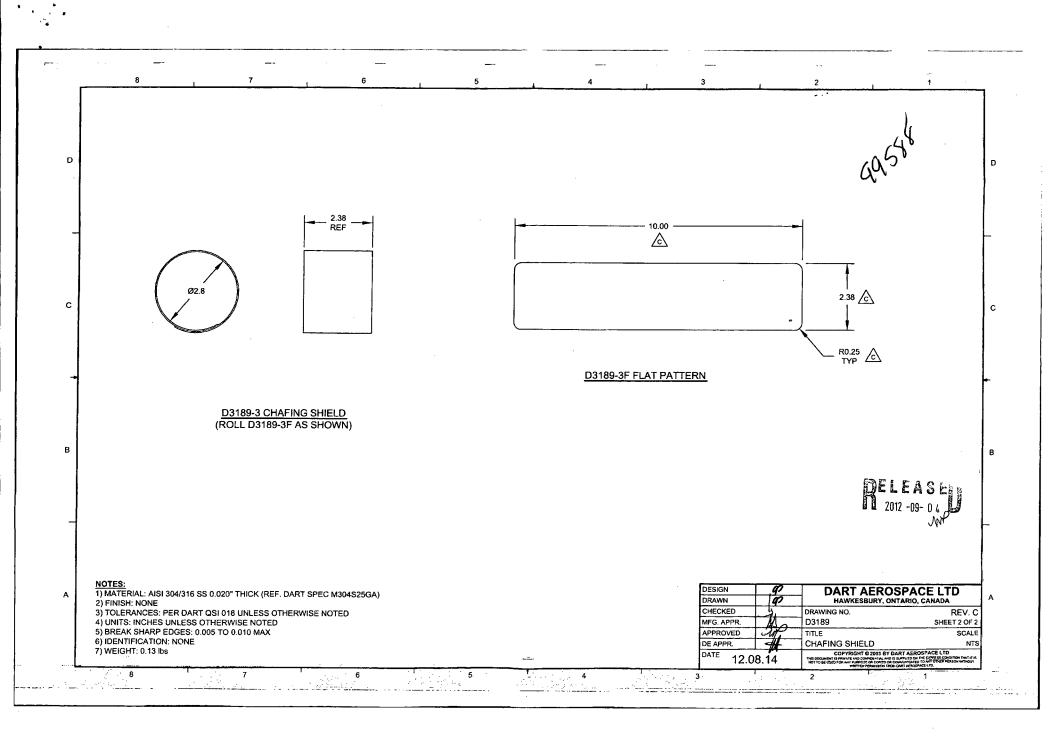
NCR:	Yes	/	No
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Date: _

DQA:

NCR: Yes / No WORK ORDER NON-CONFORMANCE / UPDATE													
									QA Closed:	Date			
Work Orde	r:				DISPOSITION		AGAINST DEPARTMENT/PROCESS						
Part No.					Rework Scrap				Water Jet Engineering Prod. Eng. Coor. Quality				
NCR No.					Use-as-is Work Order Update	Ther	Thermoforming Finishing Large Fab Composite						
Root				Descri	ption of work order update	Initial	Ac	tion	Sign &				
Cause	Date	Step	Qty		or Non-conformance	Chief En	g Desc	cription	Date	Verification	QC Inspector		
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Ĺ	Bending		•		Bend	Grain		<u></u>	Ovalized		Pressure/Forced		
L	Centre N	Centre Not Concentric to O/S			BOM/Route	Hardw	Hardware		Over/Under tolerance		Temperature/Cure		
	Cracks	Cracks			Broken/Damaged	Inspec	Inspection Incomplete		Part Incorrect		Weld		
	Crushed/	Crushed/Crimped			Burrs	Instru	Instructions Incomplete/Unclear		Part Lost/Missing		Wrong Stock Pulled		
	Cuffs				Contamination	Maint	Maintenance		Part Moved				
	Heat Treat				Countersink	Mislat	eled		Positioned V	Vrong	_		
[Inspectio	n Strip in	Tube		Cut Too Short	Misre	ad		Power Loss/	Surge	Other		
	Ripples ir	n Bend			Drill Holes	Offset							
Ī	Torque V	Vaves in E	xtrusio	n [Drawing	Out of	Calibration						
	Turning S	equence			Finish	Out of	Sequence						
	Wave/Tw	vist in Tul	oe .	Γ	Folio	Outsic	le Dimensions				,		

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												DQA:	Date	e: _	
NCR: Y	'es	/ No					WORK ORDER NON-CONFORMANCE / UPDATE								•
						_						QA Closed:	Date	2:	
Work Orde	r.					١	DISPOSITION			AGAINST I	DEI	PARTMENT	/PROCESS		
Part No.							Rework Scrap Use-as-is			Skid-tube Crosstube Machining Small Fab Thermoforming Finishing			Water Jet d. Eng. Coor. re/Packaging		Engineering Quality Other
NCR N	lo						Work Order Update			Large Fab Composite		•	Supplier		
Root					Desc	rip	tion of work order update		nitial	Action	Sign &				
Cause	1	Date	Step	Qty	<u> </u>	0	r Non-conformance	Ch	ief Eng	Description		Date	Verification		QC Inspector
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}	_	Bending				_	Bend	<u> </u>	Grain			Ovalized	· _		Pressure/Forced
ļ	-	Centre Not Concentric to O/S					BOM/Route	<u> </u>	Hardware			Over/Under		-	Temperature/Cure
ļ		Cracks					Broken/Damaged	Inspection Inc		` <u> </u>	_	Part Incorrect		-	Weld
	_	Crushed/Crimped				_	Burrs		1	ions Incomplete/Unclear	-	Part Lost/Mi	ssing		Wrong Stock Pulled
	Cuffs					_	Contamination		Mainte	}	$\overline{}$	Part Moved			
	\dashv	Heat Trea			L	4	Countersink		Mislabe	}	\rightarrow	Positioned Wrong			
	-	Inspection	-	Tube	_	4	Cut Too Short	<u></u>	Misread	i [Power Loss/S	Surge	_[Other
	-	Ripples in			-	4	Drill Holes	<u> </u>	Offset	- 					·
.	-	Torque W		xtrusio	n	-	Drawing	Ŀ	4	Calibration					
	Turning Sequence						Finish		Out of Sequence						

Wave/Twist in Tube

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

									DQA:_	Date:	
• NCR: Yes	s / No				WORK ORDER NON-C	ONFOR	MANCE / UPDATE	E(QA Closed:	Date:	
					DISPOSITION		A	GAINST DEP	ARTMENT/	PROCESS	
Vork Order:					Rework		Skid-tube Cro	osstube		Water Jet	Engineering
Part No	•				Scrap Use-as-is	1	Machining Sn rmoforming F	mall Fab inishing mposite	Proc Bec/Stor	Quality Other	
· NCR No	·				Work Order Update		Large Fab Cor	mposite		Supplier	
Root					ption of work order update	Initial	Action Descriptio	ın	Sign & Date	Verification	QC Inspector
Cause	Date	Step	Qty		or Non-conformance	Chief Er	9		-		
oc/Data guip/Tooling Operator	13/5/17	160		USE	24 GA molenul ad of 25 GA. son 5 25 GA	V	Acceptable	,			
Material etup	- '			méte	ad of 25 GA.	13/5/12	1			·	-
Other			5. S.	KEA	SON 5 25 GA		·			,	
Process				NOT	AVALLABLE, WE						. .
Supplier	4			HAVY	- BEEN USING						1.
Training	-{				A. MATIL IN THE PAST				<u> </u>		
Unapproved						AULT CA	TEGORY	<u> </u>			
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. [Bending			_	Bend	 1	lware		Over/Unde	r tolerance	Temperature/Cure
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Ļ	Cracks	IC simo m = :			Burrs		ructions Incomplete/Uncle	ear	Part Lost/N		Wrong Stock Pulled
	Crushed Cuffs	/crimped	ı	F	Contamination	Ма	intenance	<u> </u>	Part Moved		
}	Heat Tre	eat		F	Countersink	-	abeled	-	Positioned Power Loss		Other
		on Strip i	n Tube		Cut Too Short	⊢ ⊣	read	L	Jrowei Loss	,,,,,,,,	
1 h	1				Drill Holes Offset						

Out of Calibration

Out of Sequence

Outside Dimensions

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Ripples in Bend

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drill Holes

Drawing

Finish